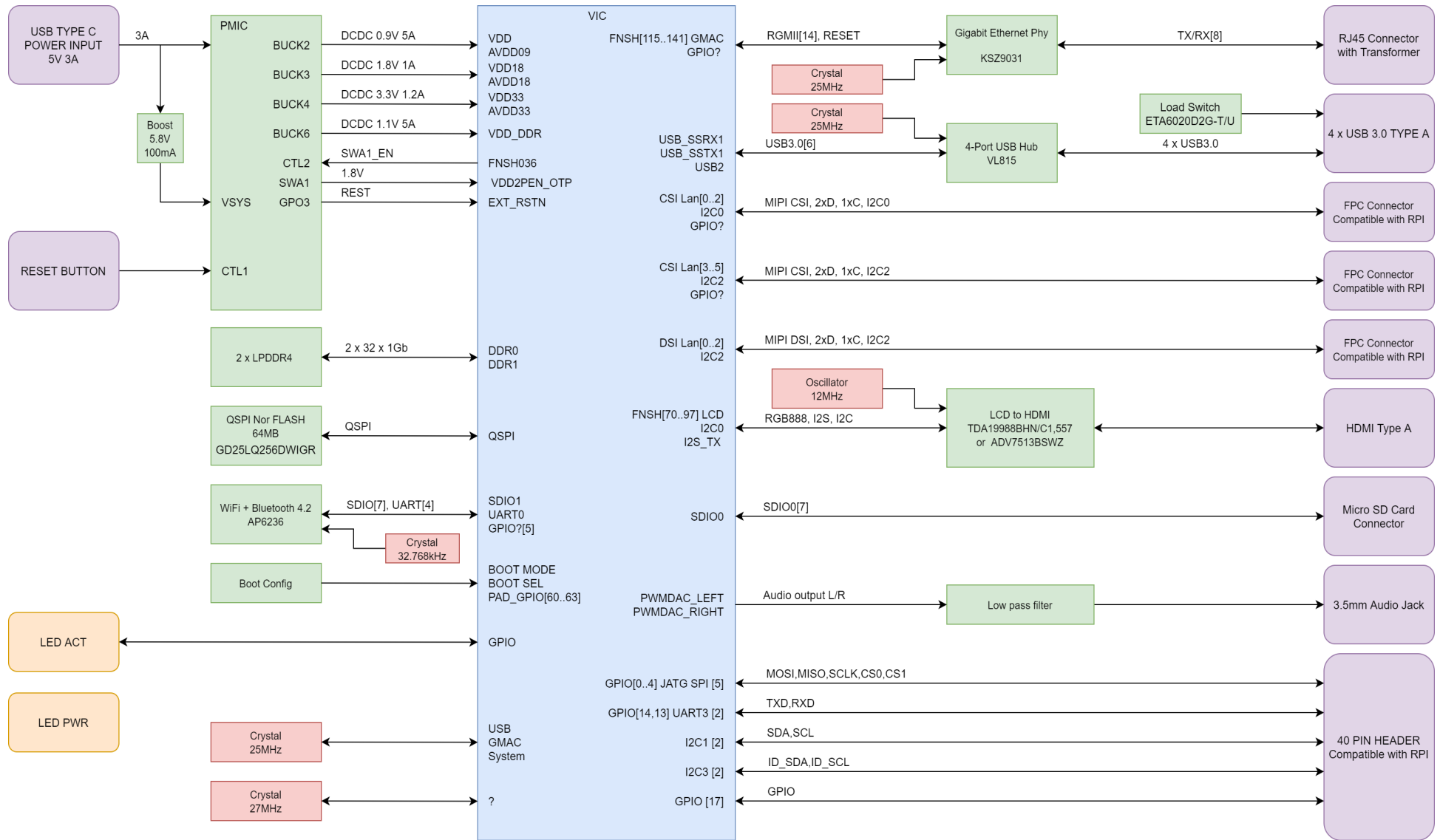


Schematic: Expansion Accessory

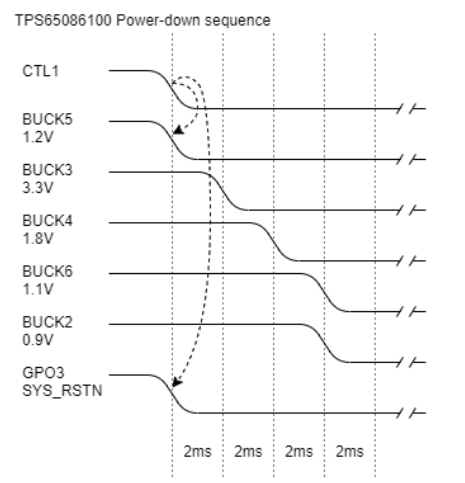
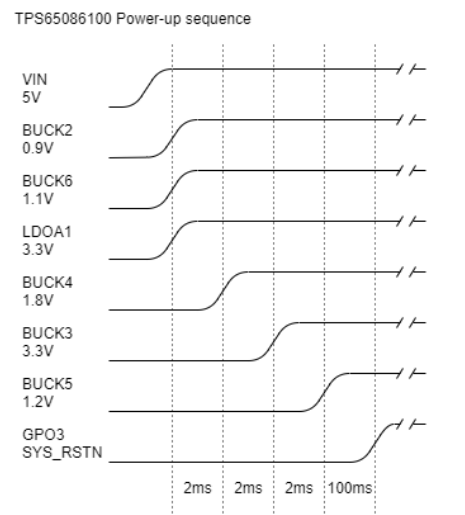
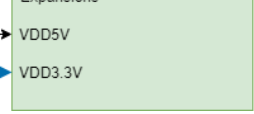
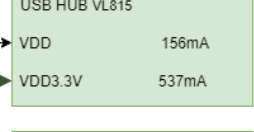
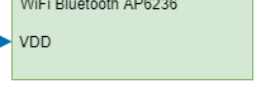
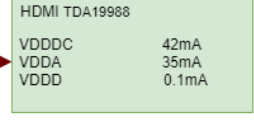
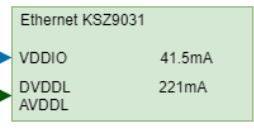
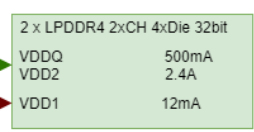
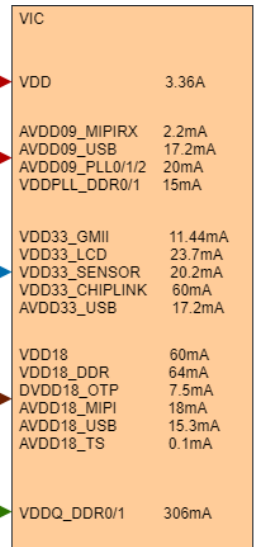
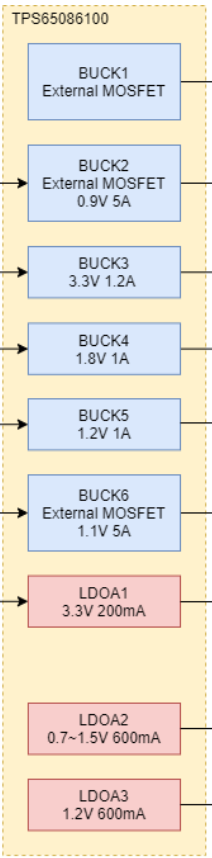
SHEET	SHEET NAME
01	Title/Revision History
02	System Block Diagram
03	Power Tree Diagram
04	PMIC
05	VIC Power
06	VIC DDR Ctrl
07	VIC ChipLink & CM
08	VIC LCD & GMII & GPIOs
09	VIC HighIF & Ctrl Other
10	LPDDR (A)
11	LPDDR (B)
12	Type C,uSD, QSIP Flash
13	USB 3.0 HUB
14	2 x USB TYPE A (A)
15	2 x USB TYPE A (B)
16	2 x CSI CONN
17	DSI, AUDIO JACK
18	HDMI FRAMER
19	WiFi, Bluetooth
20	10/100/1000 ETHERNET
21	RPI EXP CONN, LED, BUTTON

Revision History

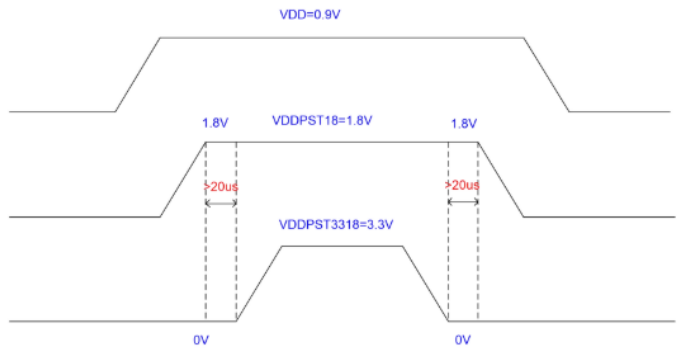
DATE	REVISION	DESCRIPTION
Nov. 23 2020	v0.1	1. Initial release
Nov. 25 2020	v0.2	1. Add USB Hub circuit 2. Modify reset circuit of KSZ9031, removed interrupt function 3. Change 1V2 output form LDO3 to BUCK5
Nov. 25 2020	v0.3	1. Add Power down control and power on button
Dec. 1 2020	v0.4	1. Add reset button
Dec. 23 2020	v0.5	1. Add U74 JTAG connector for Tag-Connect cable 2. Modified GPIO assignment for better layout



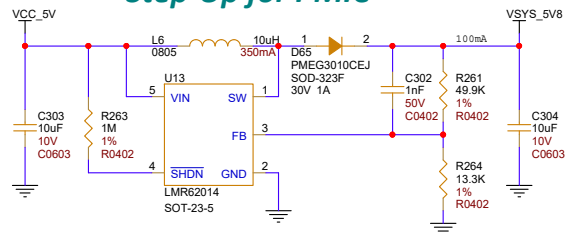
USB TYPE C
POWER INPUT
5V 3A



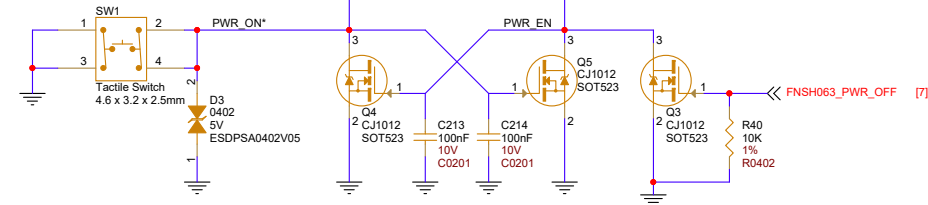
VIC Power-up/dwon sequence



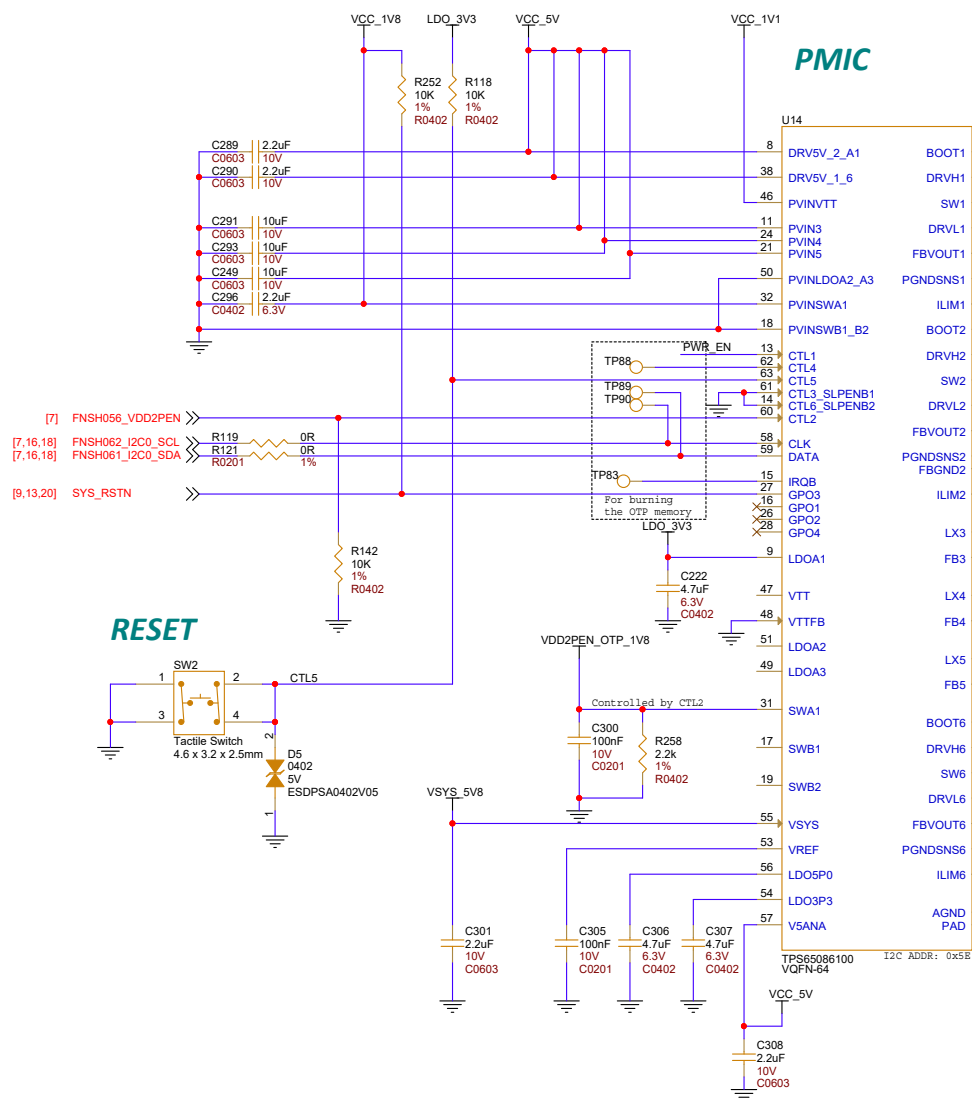
Step-Up for PMIC



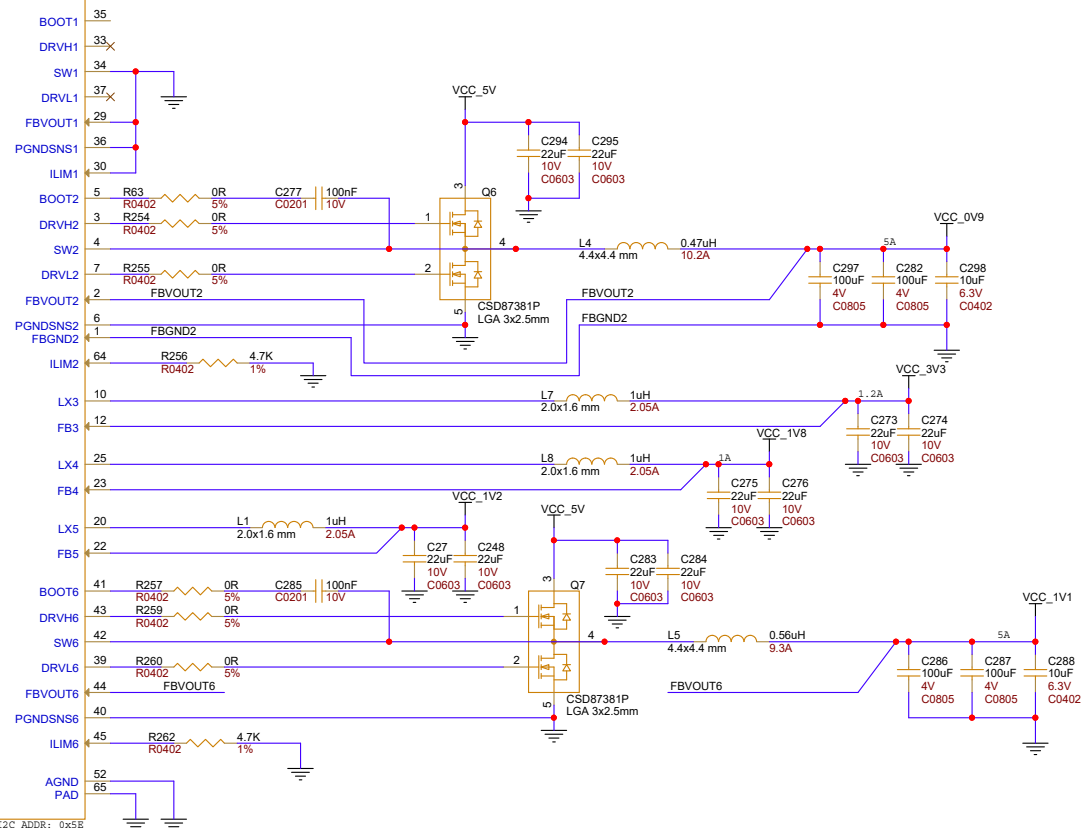
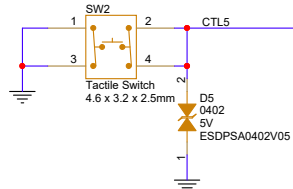
ON/OFF Logic



PMIC



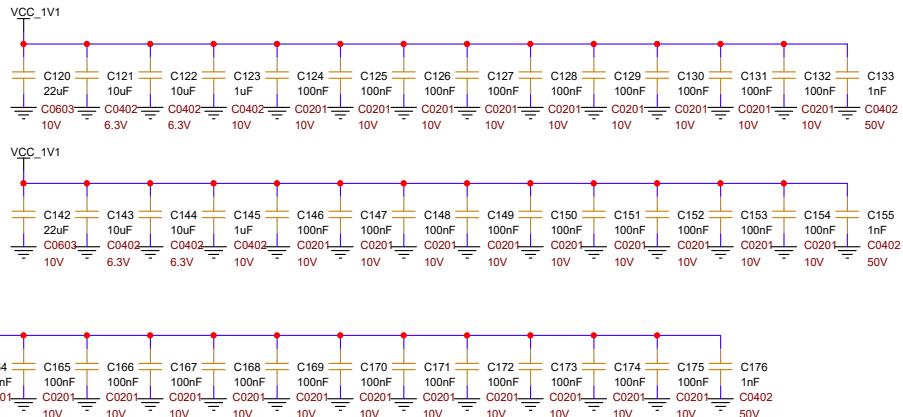
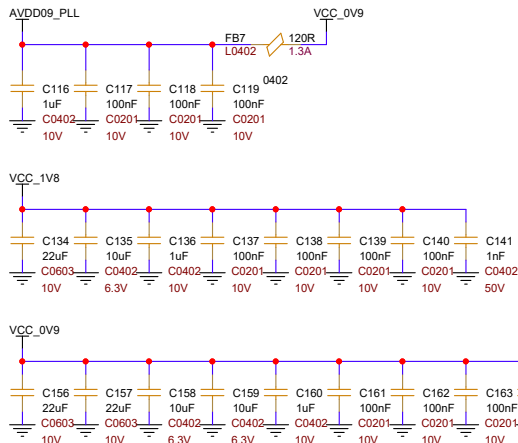
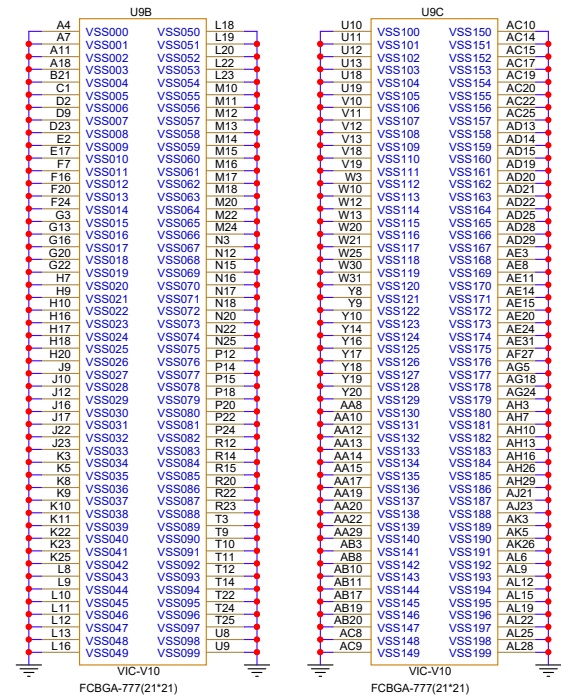
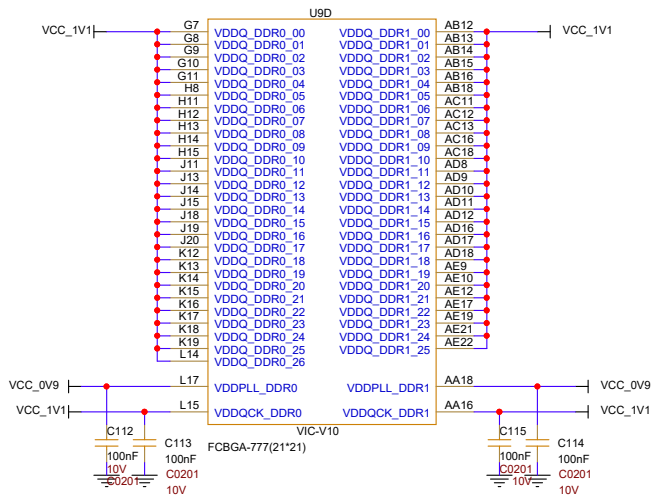
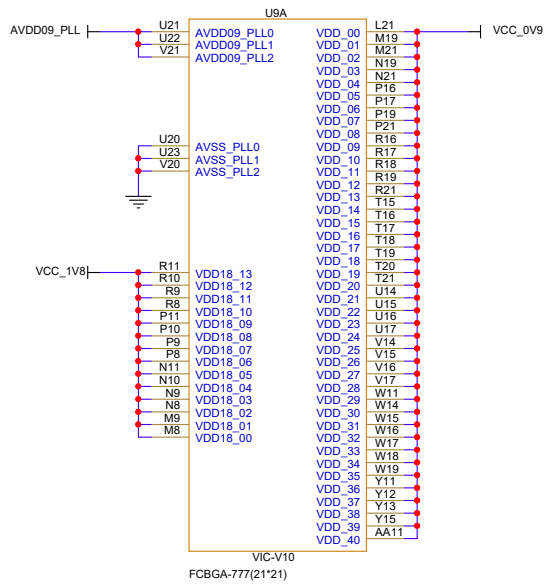
RESET



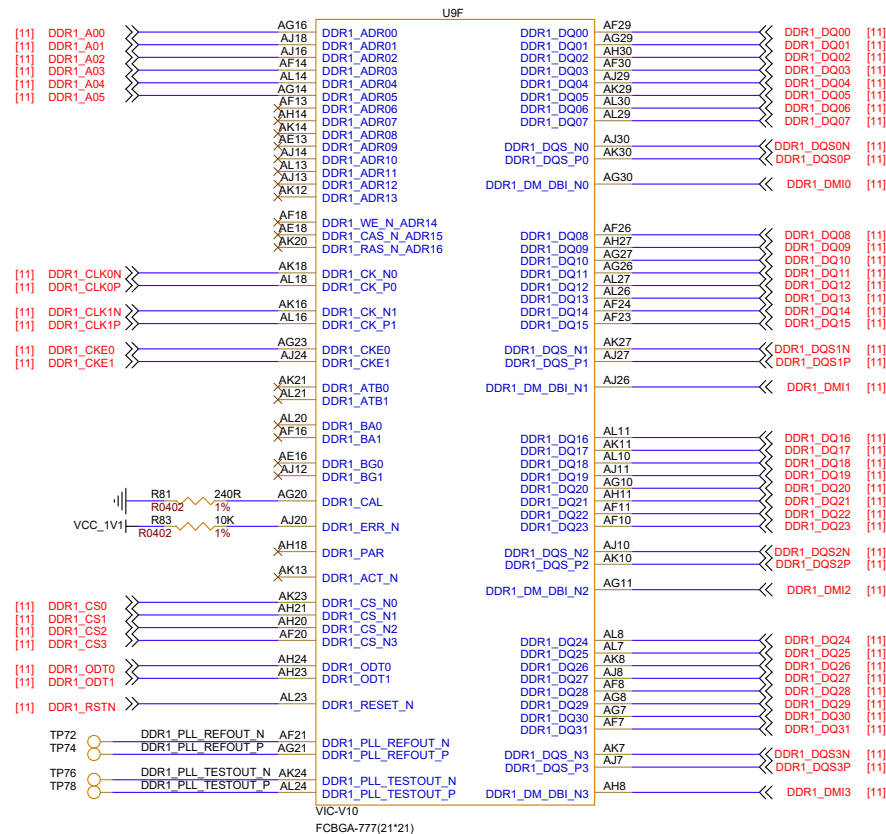
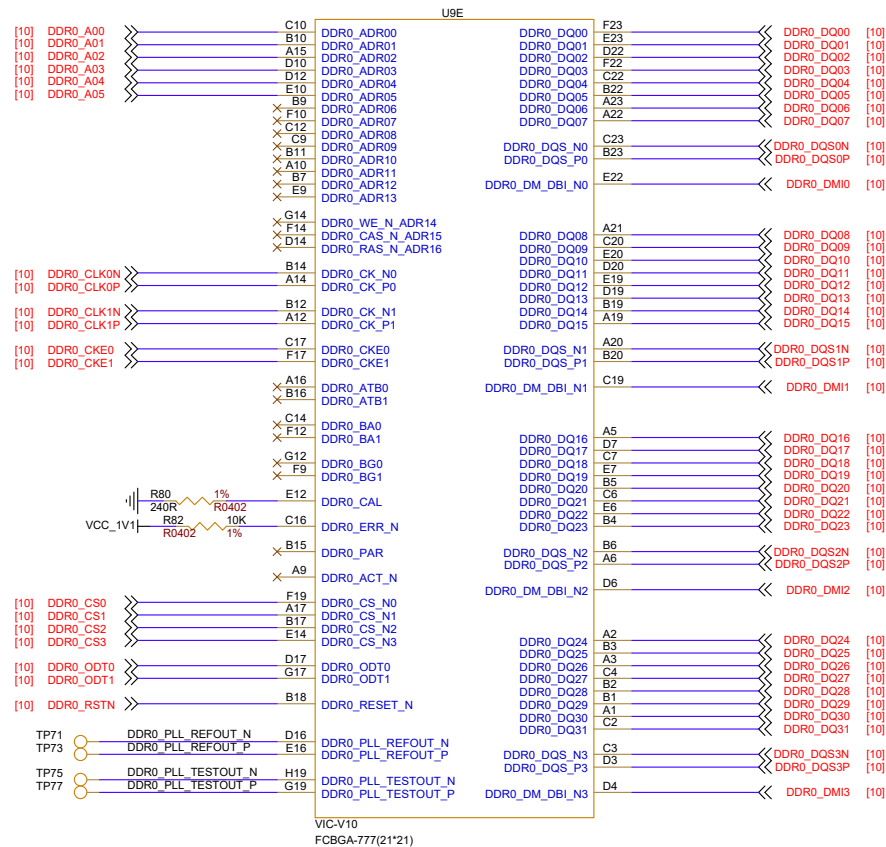
<https://www.seeedstudio.com>

Title: RV PI

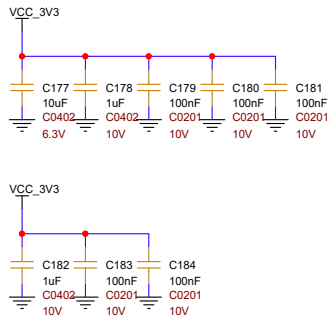
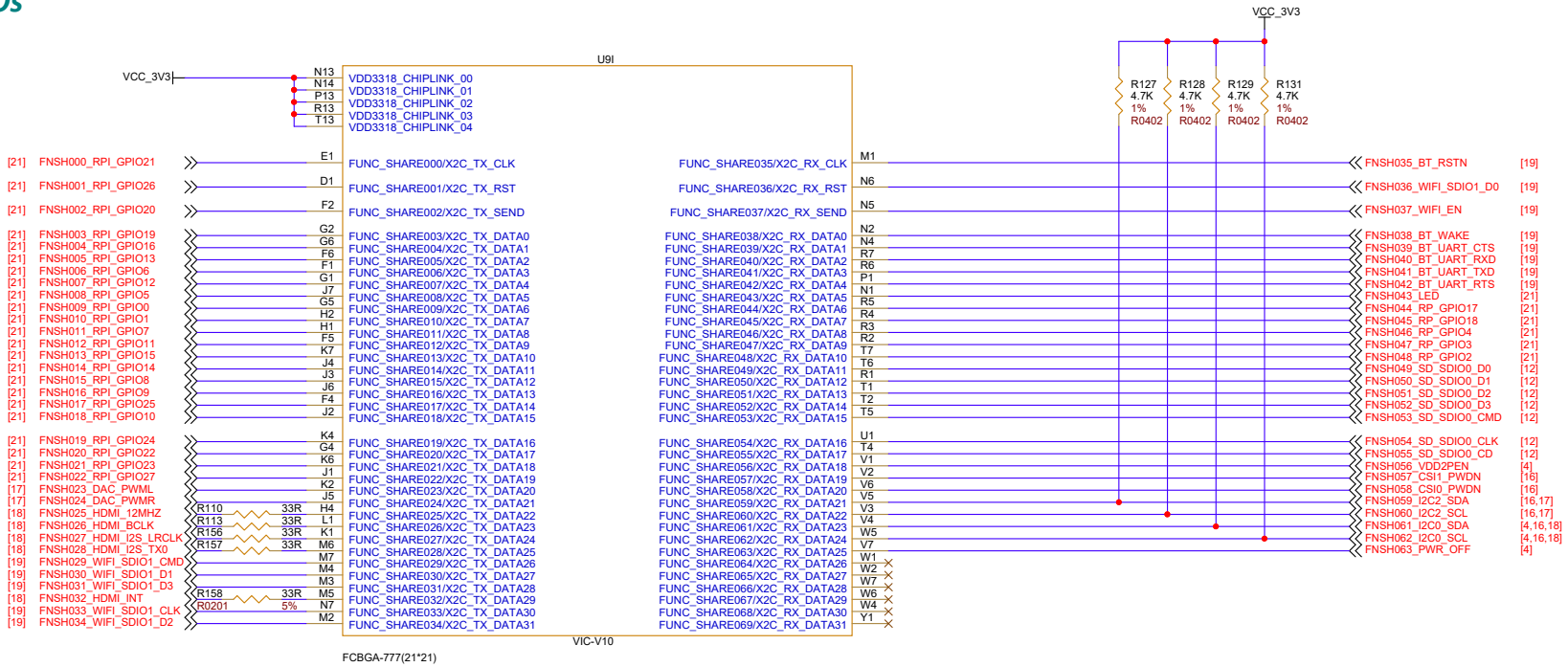
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Draw By: <Drawing>	Date: Wednesday, December 23, 2020	Sheet: 4 of 2

VIC Power

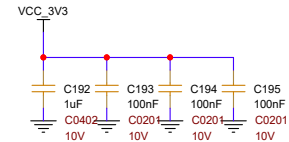
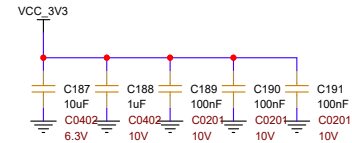
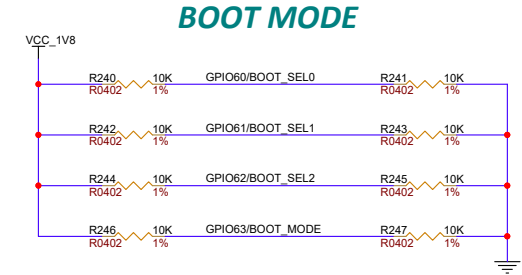
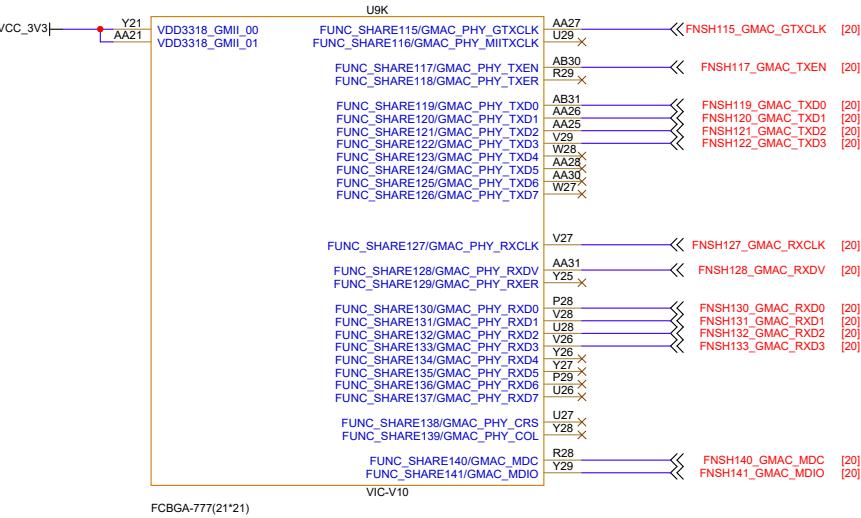
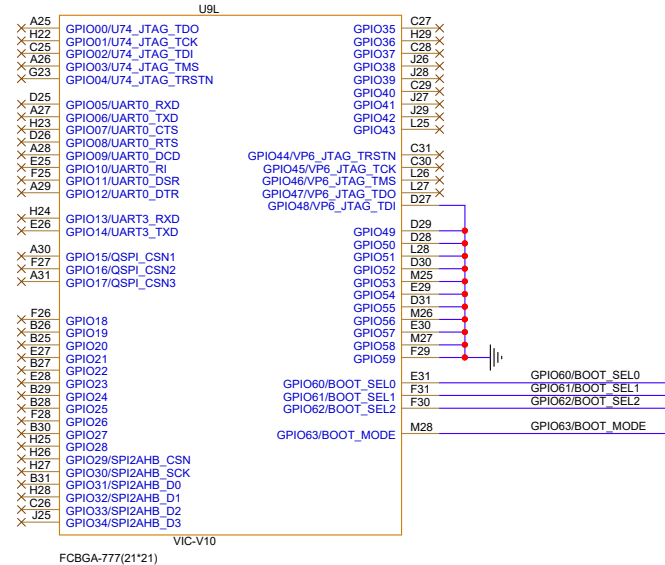
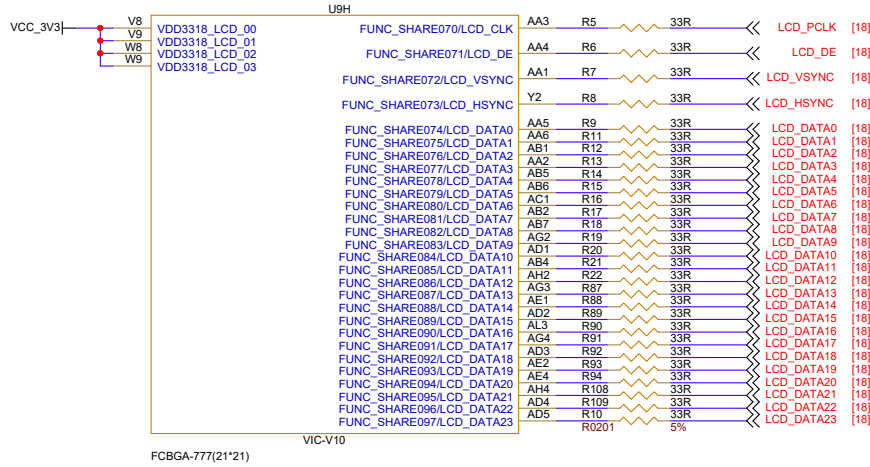
VIC DDR controller



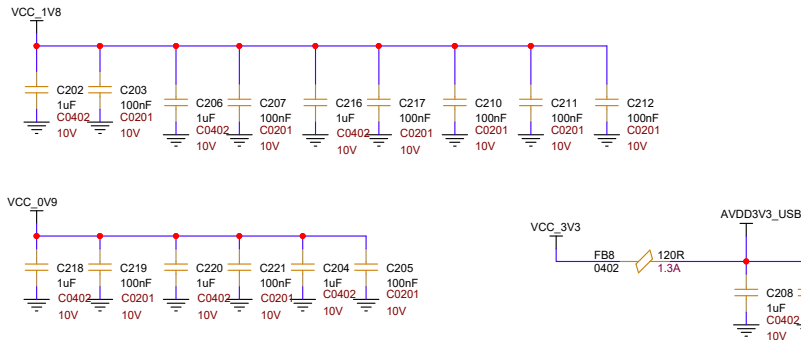
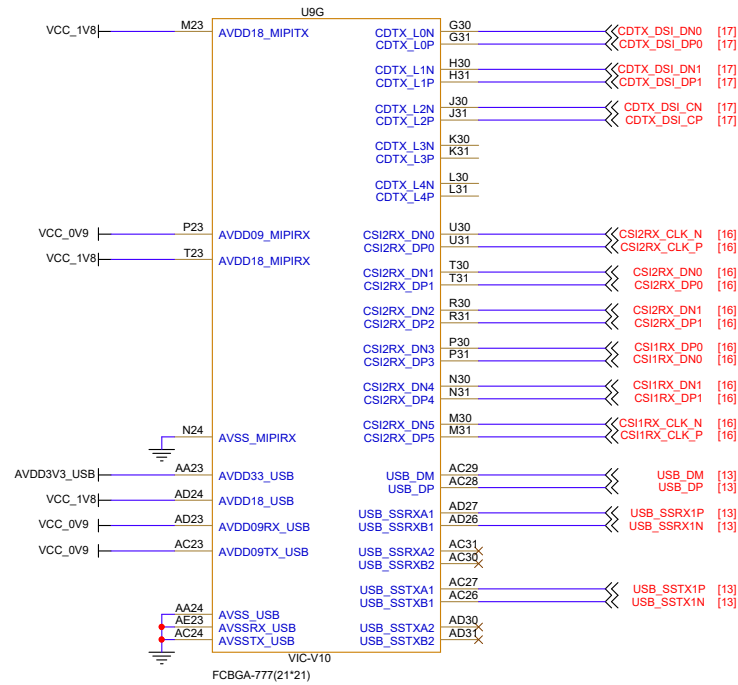
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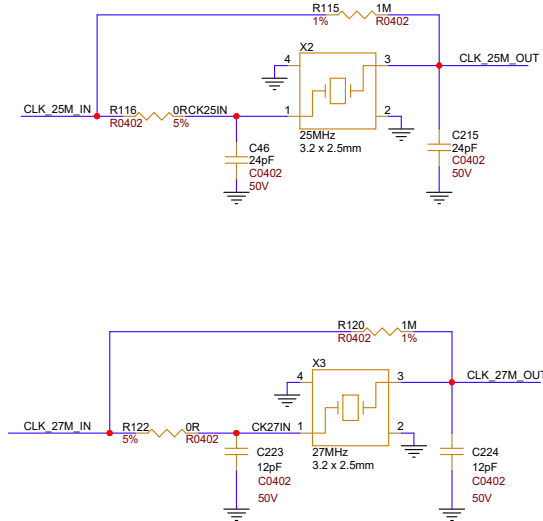
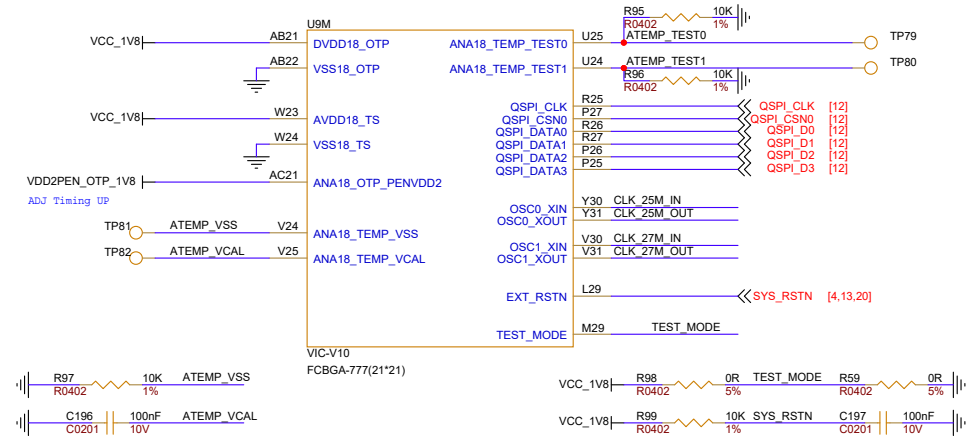
VIC LCD&RGMII

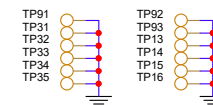
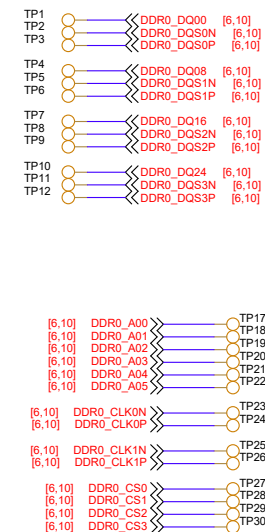
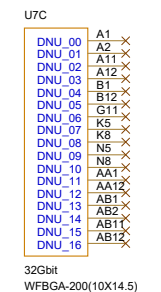
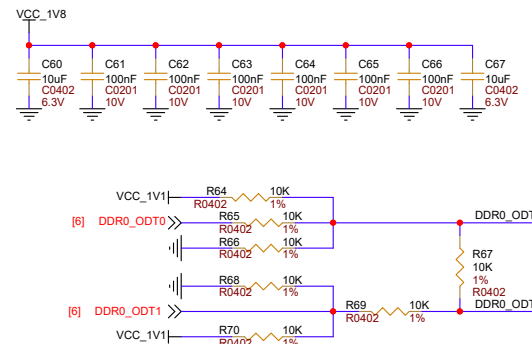
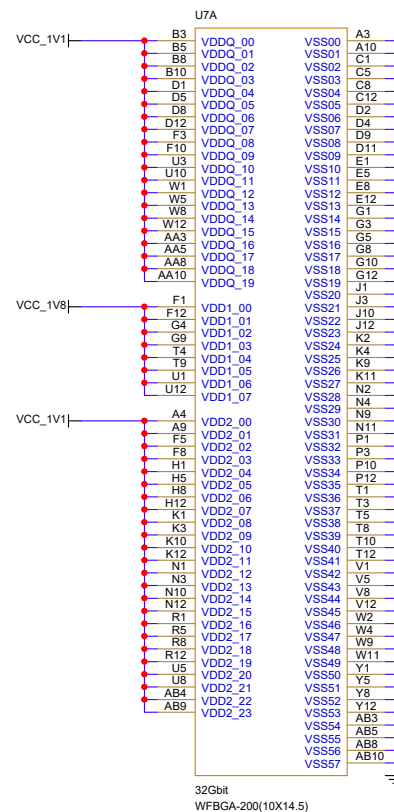
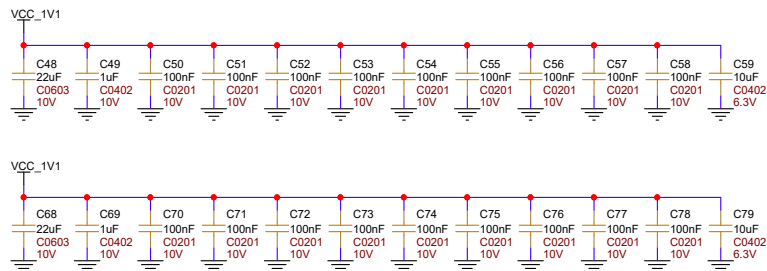
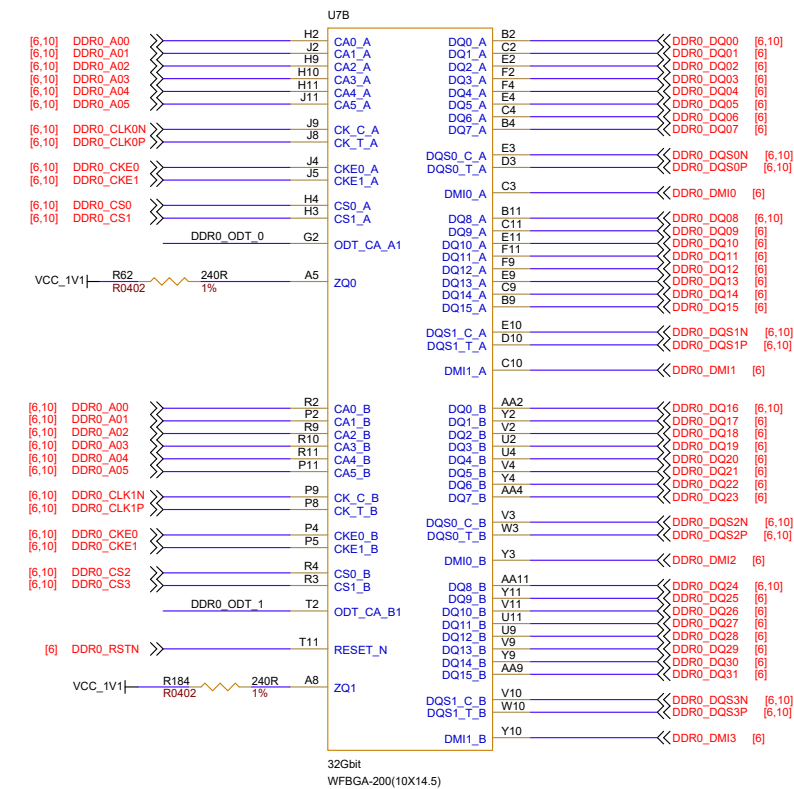


VIC MIPI&USB

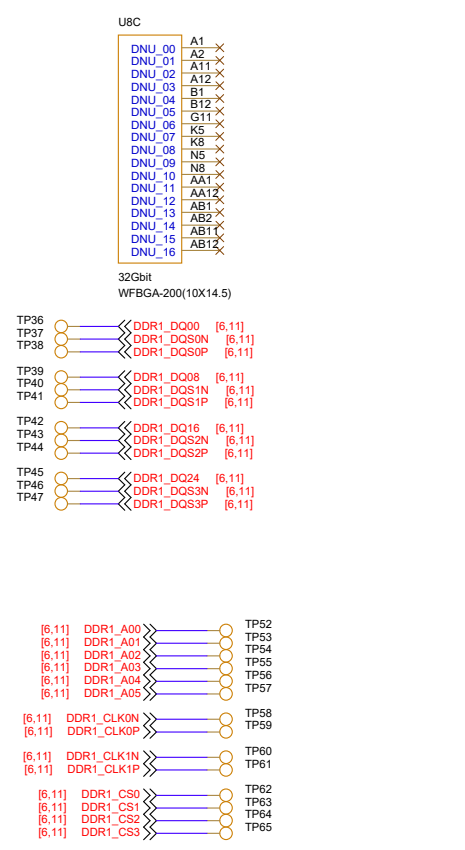
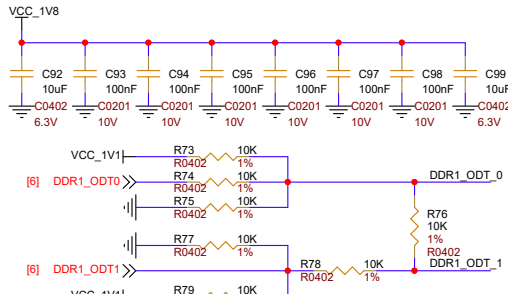
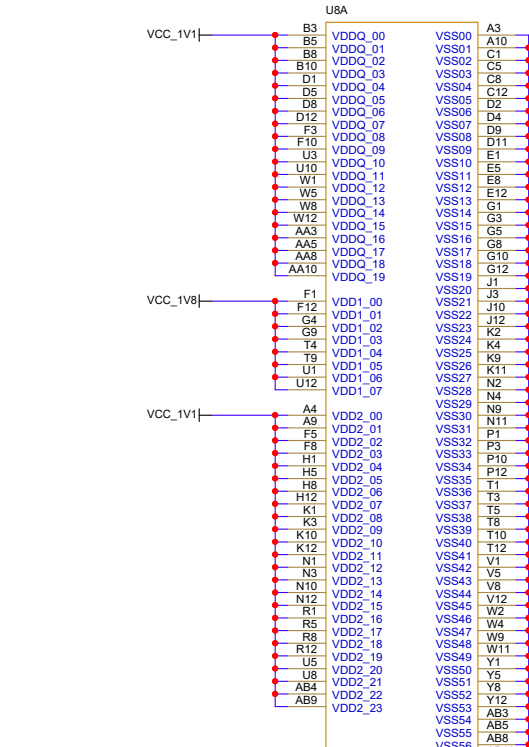
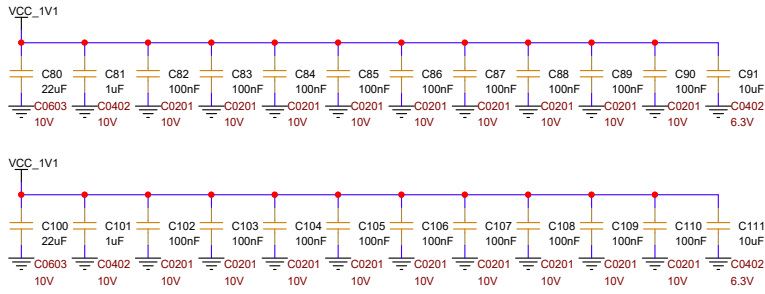
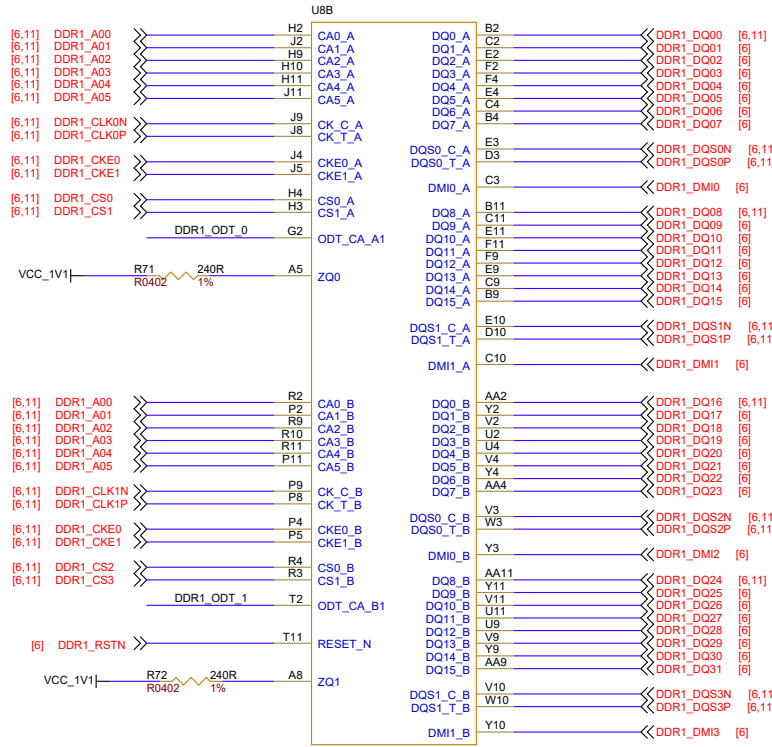


VIC Clock&





LPDDR4



J13
TYPE-C 2.0
USB2_0_TYPE_C



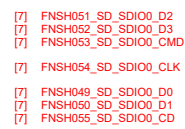
VCC_1V8|—R101 4.7K
R0402 1%



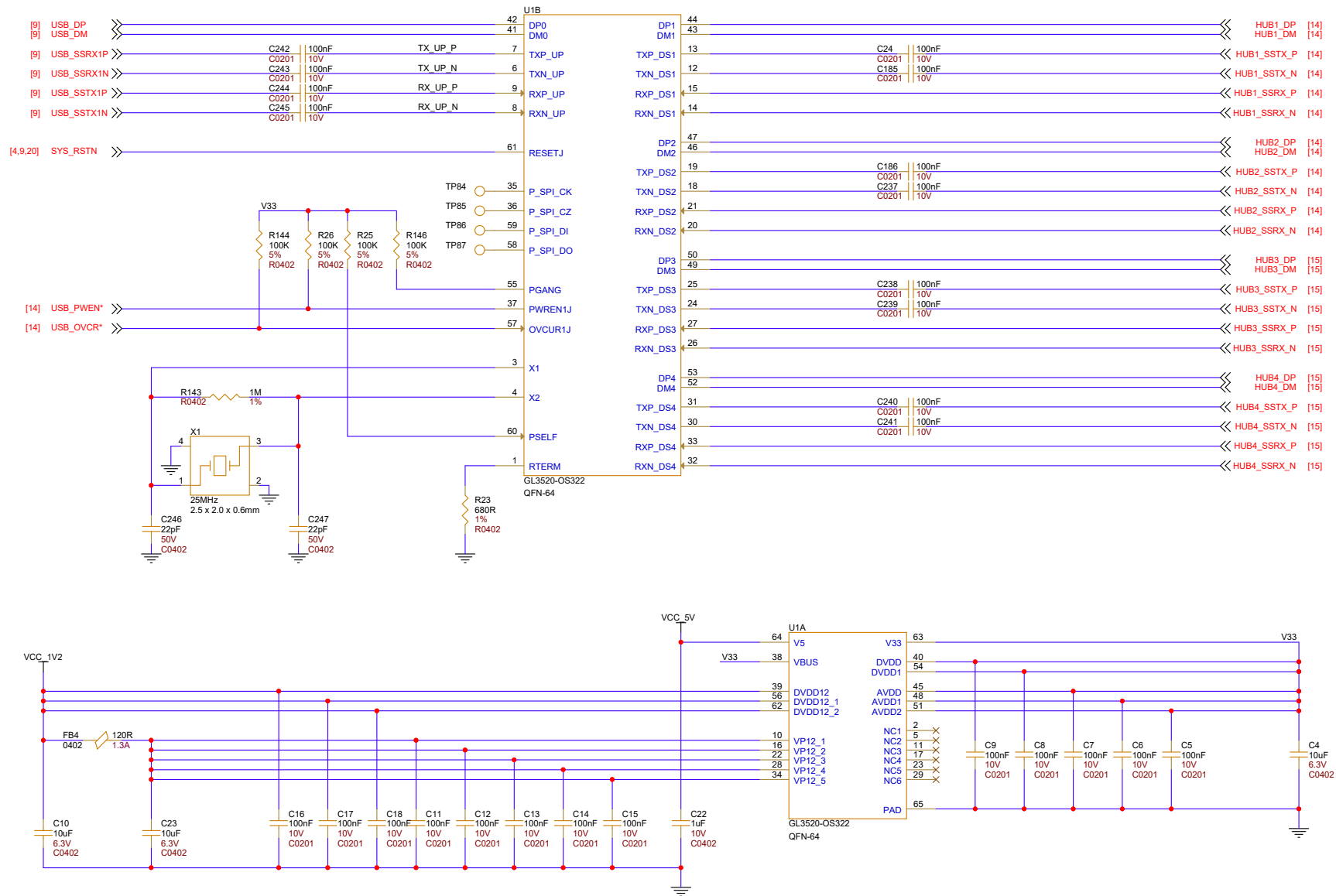
FNSH051_SD_SDIO0_D2
FNSH052_SD_SDIO0_D3
FNSH053_SD_SDIO0_CMD

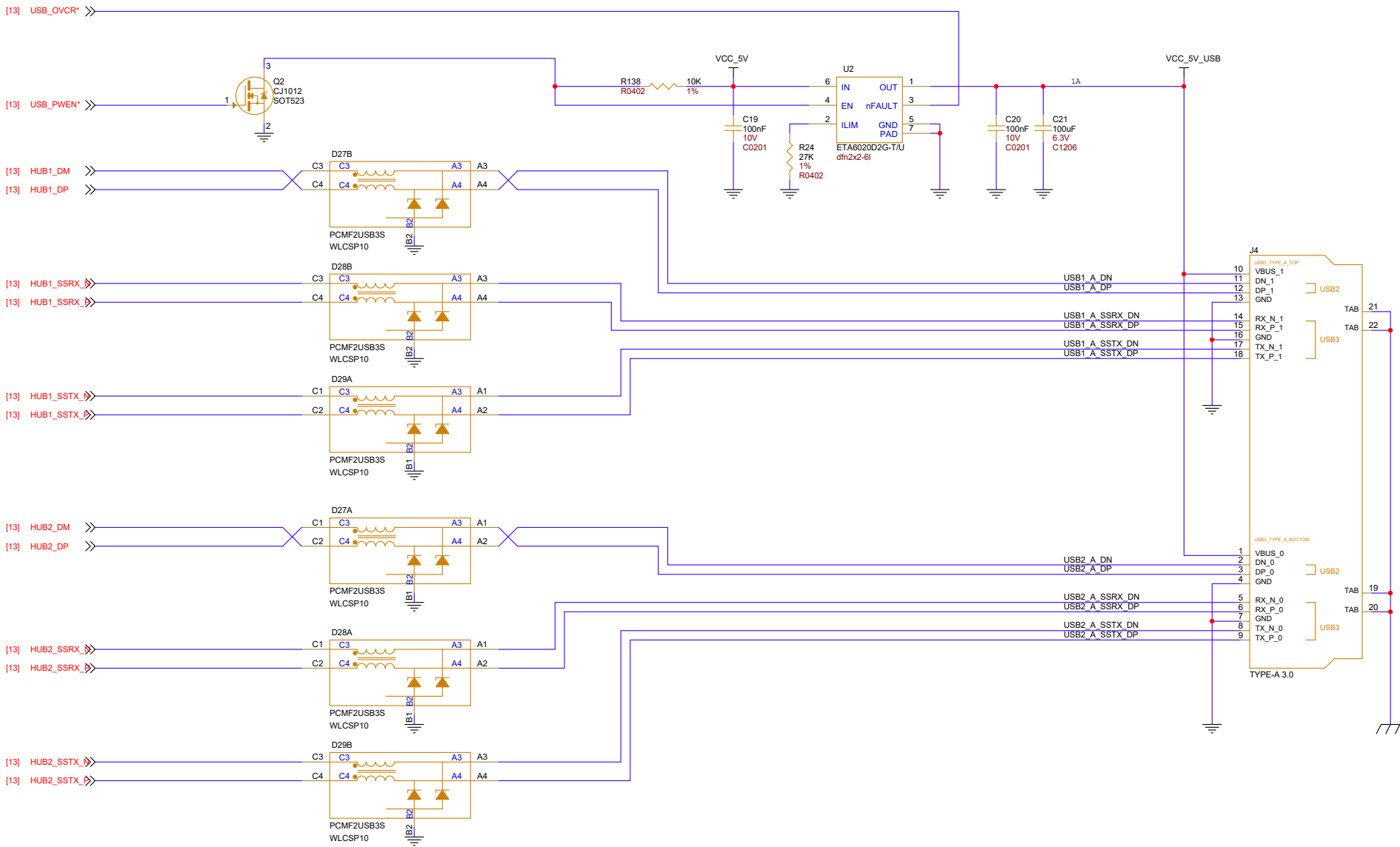
FNSH054_SD_SDIO0_CLK

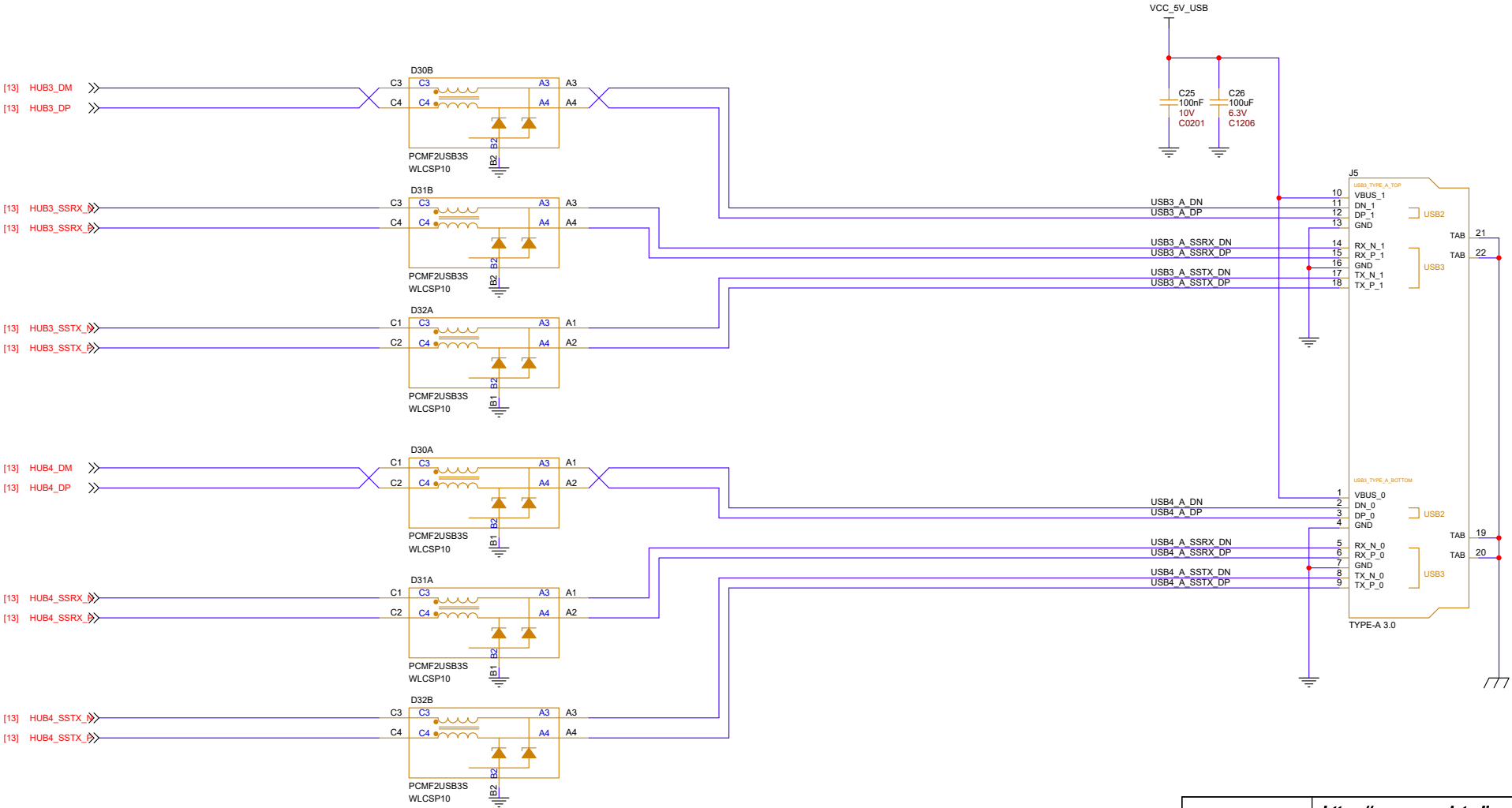
FNSH049_SD_SDIO0_D0
FNSH050_SD_SDIO0_D1
FNSH055_SD_SDIO0_CD



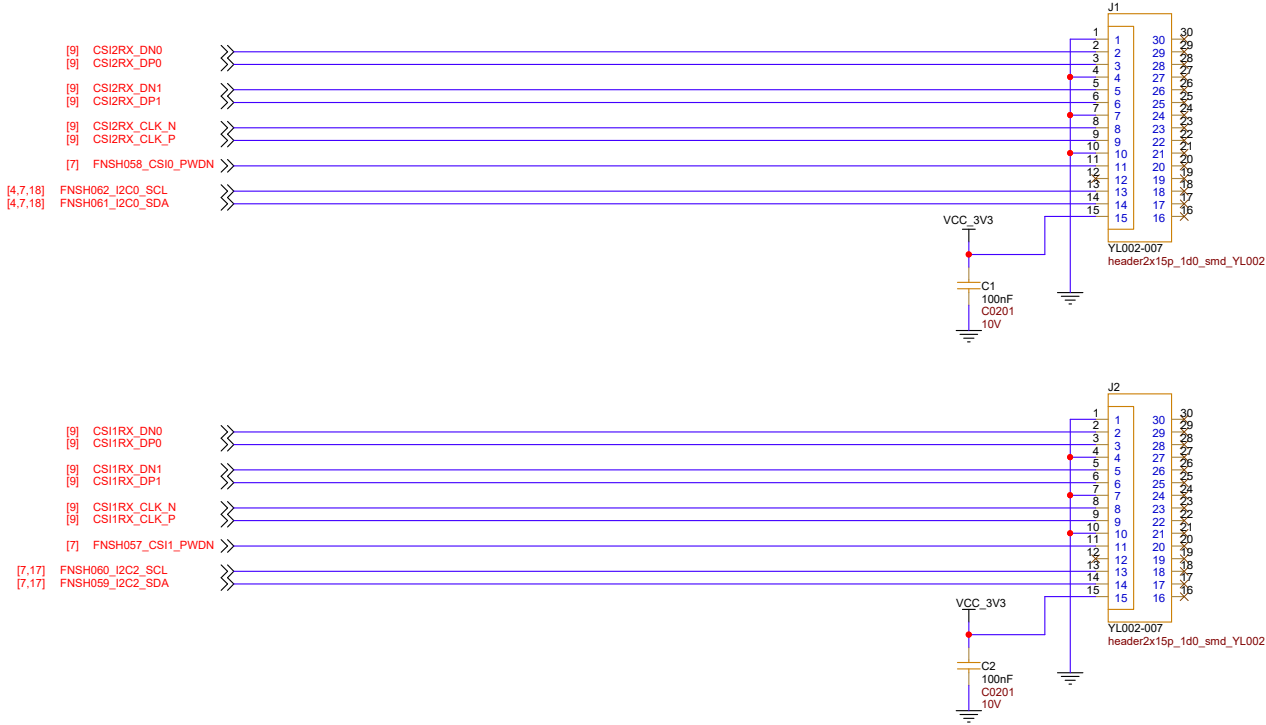
USB 3.0 HUB
TBD



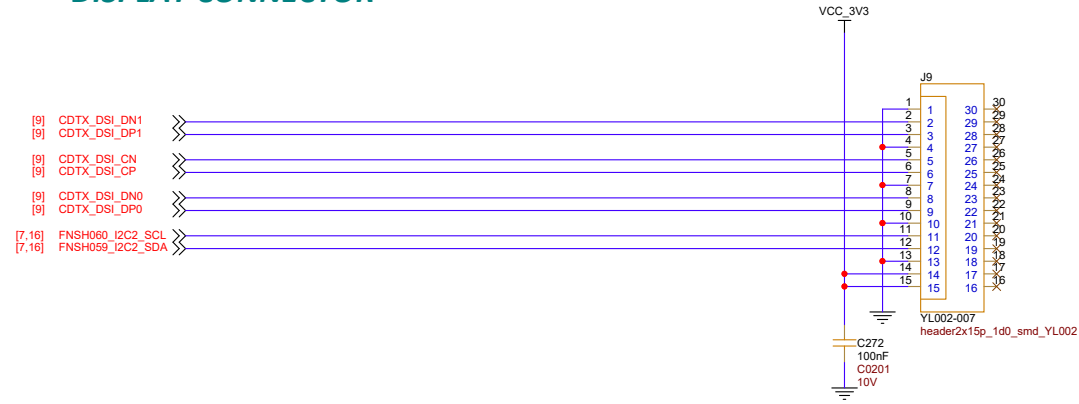




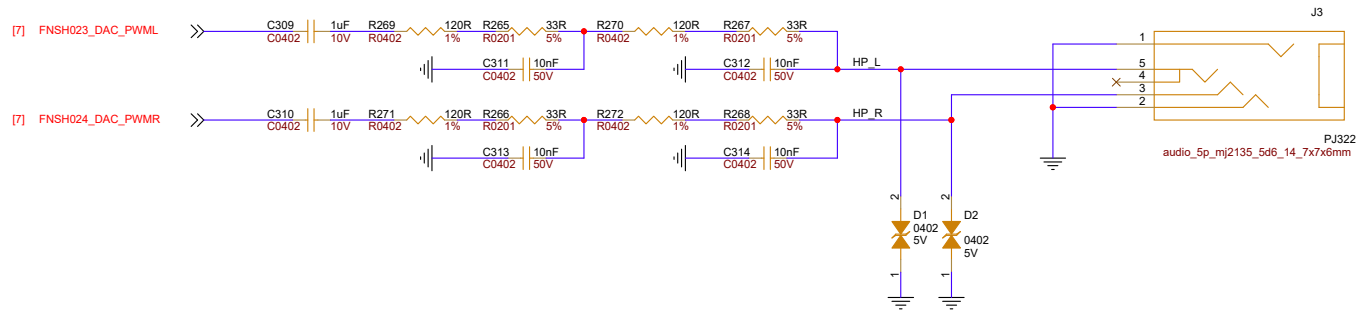
CAMERA CONNECTOR



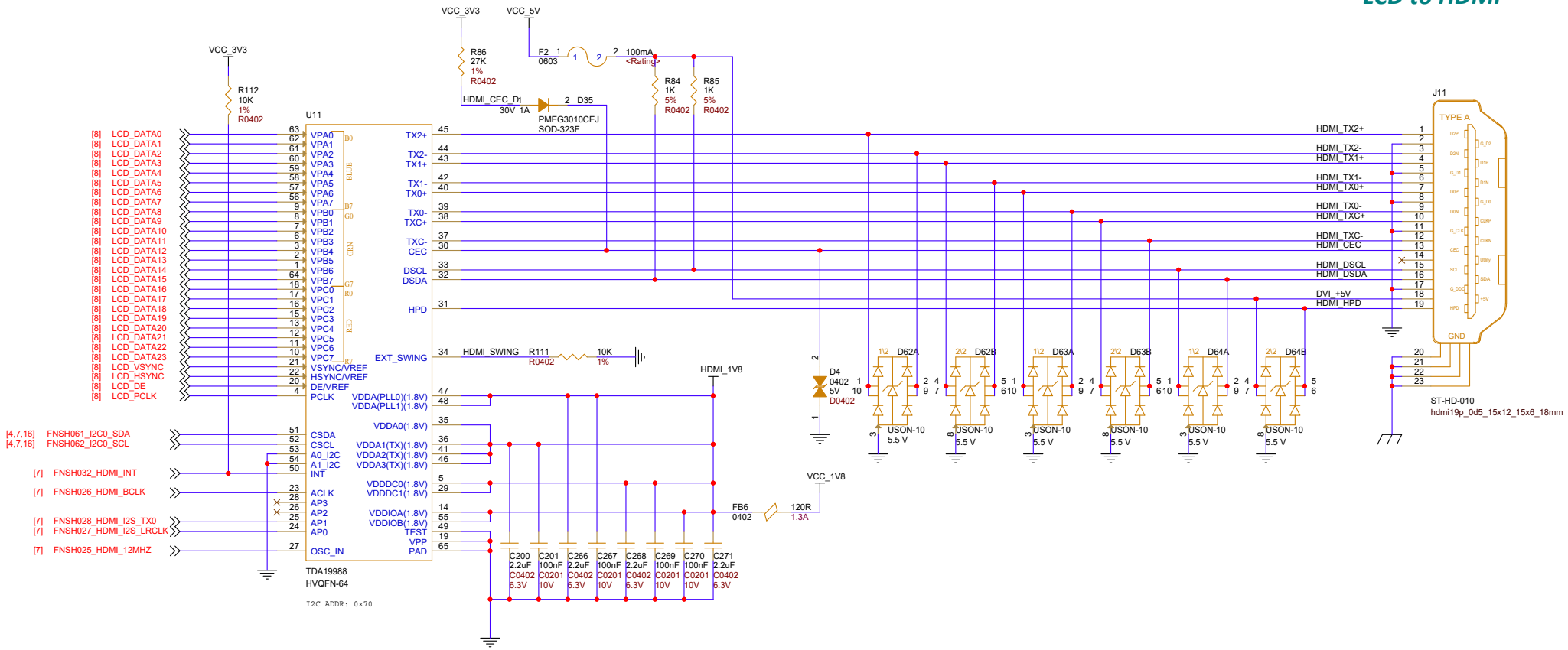
DISPLAY CONNECTOR

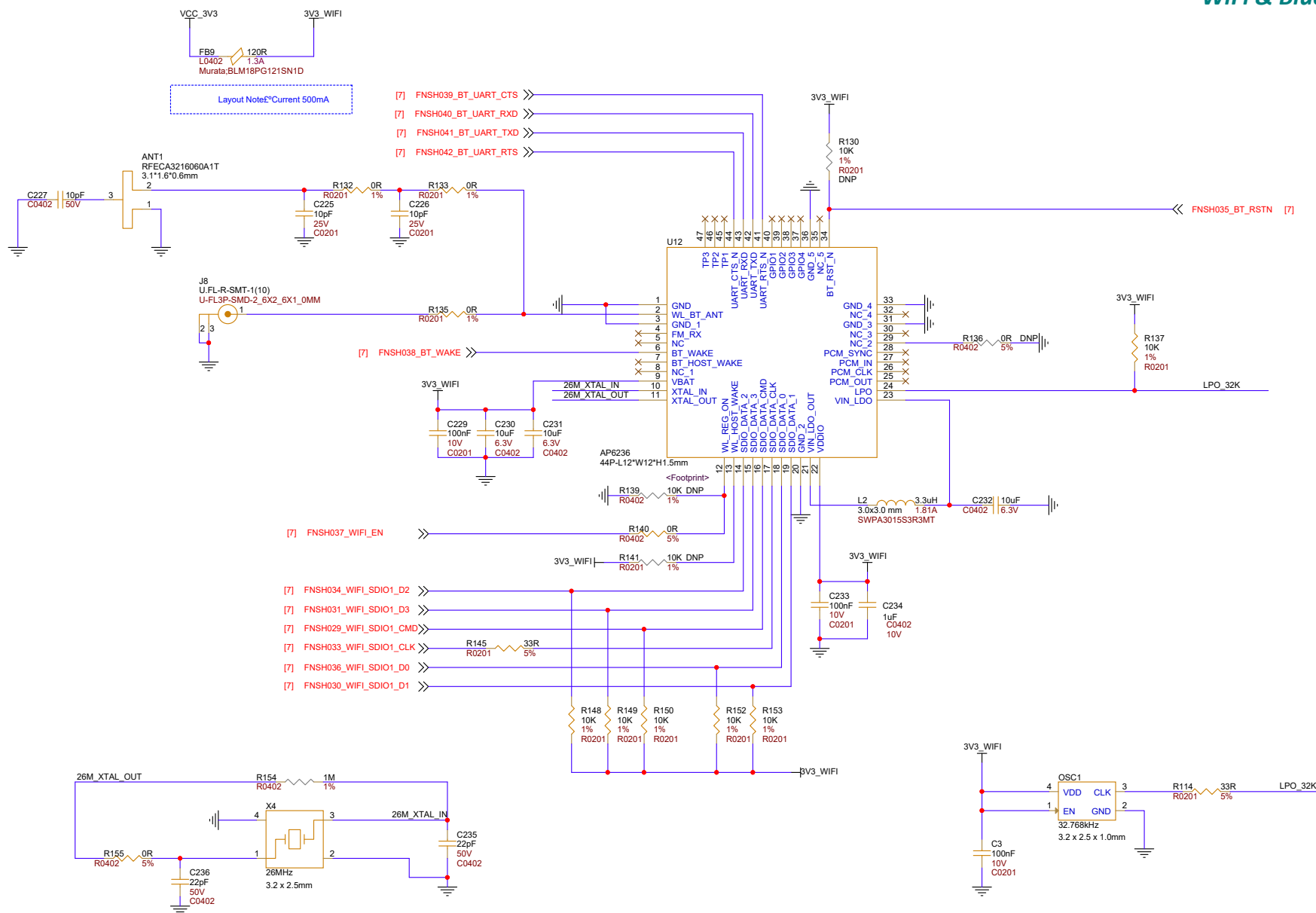


AUDIO

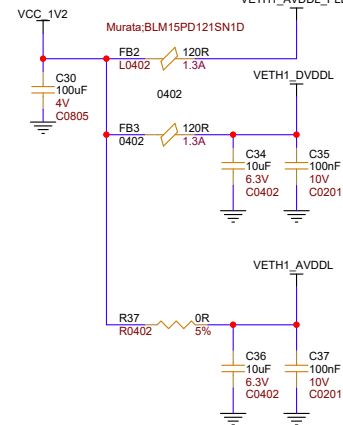
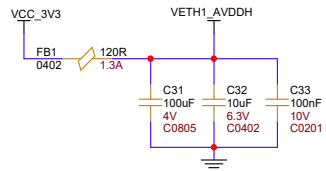
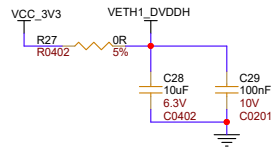


LCD to HDMI

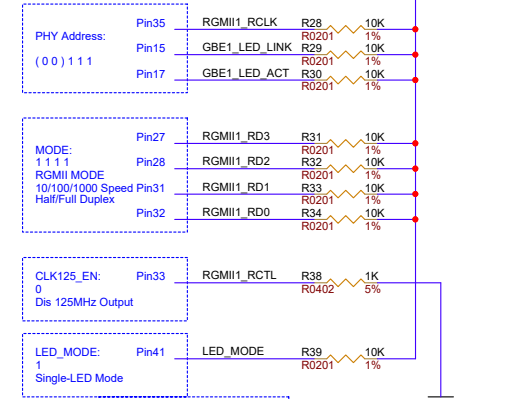




Gigabit Ethernet



Strapping Options:



Layout Note:

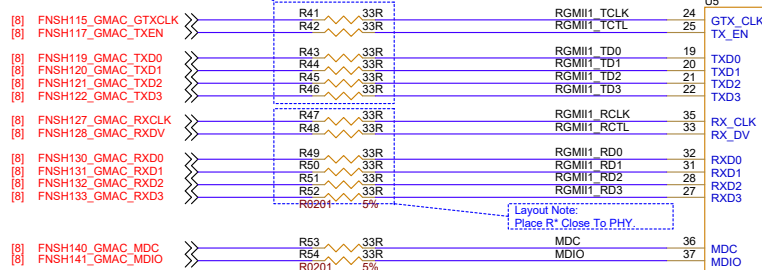
The RGMII1 signals must be length-matched by TX and RX groups:

That is, the TX group should be matched within 300 Mil (7.62 mm), and the RX group should be matched within 300 Mil (7.62 mm). Total length should not exceed 1750 Mil (44.5 mm).

There is no requirement to match the TX and RX groups because their clocks are not related.

Layout Note:

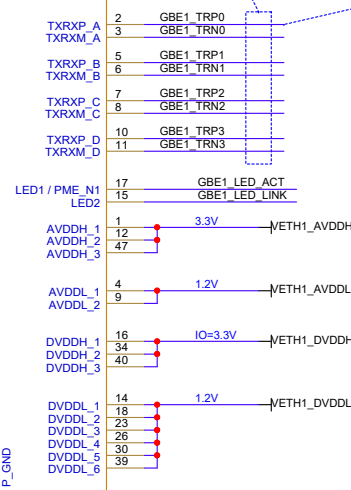
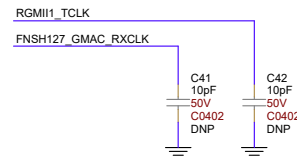
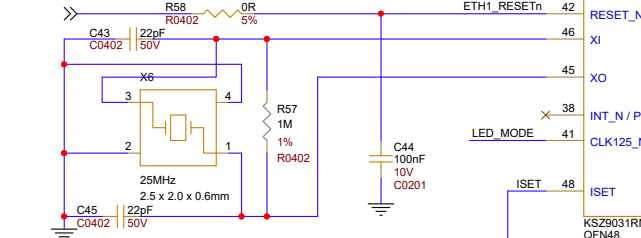
Place R* Close To MPU.



Layout Note:

Place R* Close To PHY.

[4,9,13] SYS_RSTN



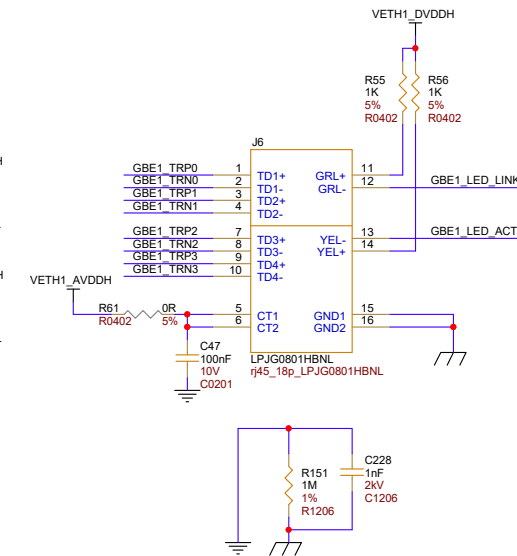
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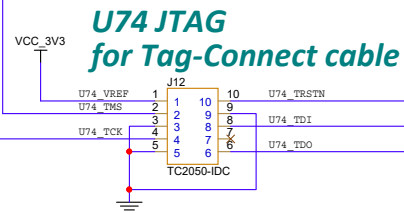
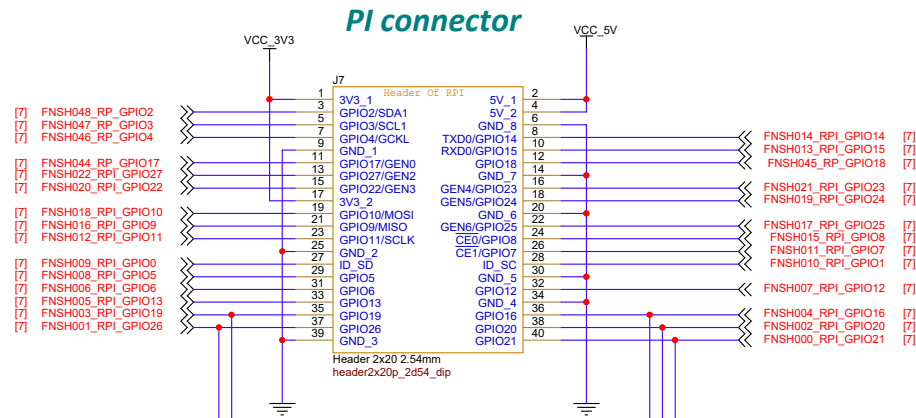
The KSZ9031RNX reduces board cost and simplifies board layout by using on-chip termination resistors for the four differential pairs, so no other resistors are needed.

Layout Note:

Max trace-length mismatch between GBE signals pairs should be no greater than 7 mm.

100 ohms differential trace impedance.





ACK&Power LEDs

